

**Tab. S3** Approximate coefficients for log-ratios of trace element-based DF1 and DF2 equations for the set of five diagrams for intermediate magmas proposed by Verma and Verma (2013) and acid magmas by Verma et al. (2013)

Equation characteristics DFn <sub>(TF1-TF2-TF3)figt</sub>	Equation Number (B)	Approximate coefficient values obtained from LDA							
		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	C <sub>7</sub>	C <sub>C</sub>
DF1 <sub>(IA+CA-CR+OI-Col)tint</sub>	(51)	-0.167	-1.254	1.295	1.332	0.270	1.929	0.181	-3.816
DF2 <sub>(IA+CA-CR+OI-Col)tint</sub>	(52)	-0.243	1.727	0.490	-1.276	0.960	0.851	-0.489	-3.306
DF1 <sub>(IA-CA-CR+OI)tint</sub>	(53)	0.018	-1.269	1.741	1.324	0.029	1.581	0.172	-3.385
DF2 <sub>(IA-CA-CR+OI)tint</sub>	(54)	-2.100	-2.044	-0.412	1.022	1.244	1.877	1.070	-0.292
DF1 <sub>(IA-CA-Col)tint</sub>	(55)	0.093	0.752	0.930	0.124	0.348	1.473	-0.034	-5.801
DF2 <sub>(IA-CA-Col)tint</sub>	(56)	-2.038	-0.073	-1.360	-0.078	1.825	2.774	0.444	-3.684
DF1 <sub>(IA-CR+OI-Col)tint</sub>	(57)	0.721	-1.352	1.379	1.164	-0.042	1.558	-0.164	-2.934
DF2 <sub>(IA-CR+OI-Col)tint</sub>	(58)	0.238	-2.035	-0.250	1.347	-0.761	-0.787	0.377	4.155
DF1 <sub>(CA-CR+OI-Col)tint</sub>	(59)	-0.977	-1.389	1.366	1.900	0.569	1.658	-0.305	-0.877
DF2 <sub>(CA-CR+OI-Col)tint</sub>	(60)	-0.087	1.164	0.364	-0.901	1.126	1.191	-0.400	-3.915
DF1 <sub>(IA+CA-CR+OI-Col)tacid</sub>	(61)	-4.994	7.810	-4.329	0.822	0.063	0.644	-0.567	-9.497
DF2 <sub>(IA+CA-CR+OI-Col)tacid</sub>	(62)	2.325	-3.620	2.621	0.252	0.843	-1.139	-1.269	10.251
DF1 <sub>(IA-CA-CR+OI)tacid</sub>	(63)	-5.209	6.616	-3.632	1.692	0.334	1.558	-0.488	-9.614
DF2 <sub>(IA-CA-CR+OI)tacid</sub>	(64)	-3.721	4.792	-2.678	0.158	-0.499	1.035	-0.342	-4.934
DF1 <sub>(IA-CA-Col)tacid</sub>	(65)	-0.047	1.076	-0.963	0.840	0.594	0	-0.878	-0.731
DF2 <sub>(IA-CA-Col)tacid</sub>	(66)	-4.067	4.736	-0.077	-0.225	0.774	0	-2.495	5.099
DF1 <sub>(IA-CR+OI-Col)tacid</sub>	(67)	0.259	1.047	-1.004	0.898	0.542	0.089	-0.620	-2.914
DF2 <sub>(IA-CR+OI-Col)tacid</sub>	(68)	-5.356	8.414	-5.369	0.483	-0.411	1.119	0.373	-13.950
DF1 <sub>(CA-CR+OI-Col)tacid</sub>	(69)	-5.409	8.436	-4.783	0.776	-0.079	0.636	-0.263	-11.340
DF2 <sub>(CA-CR+OI-Col)tacid</sub>	(70)	1.683	-1.730	0.516	0.838	1.037	-0.984	-1.414	6.088